

WHAT IS CLAIMED IS:

1. An electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit driven by the electrical energy to
5 control the rotation period of the generator, the rotation control unit comprising:

a brake control unit that compares a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

10 a generator-stop preventing unit that sets the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

2. An electronic unit according to Claim 1, wherein the first brake setting value is
15 set to a value that makes the amount of brake applied zero.

3. An electronic unit according to Claim 1, wherein the first brake setting value is set to a value equal to or less than a minimum amount of brake selected from among a plurality of amounts of brake that can be set in the brake control unit.

4. An electronic unit according to Claim 1, wherein the generator-stop preventing
20 unit sets the amount of brake applied to the generator to the first brake setting value in synchronization with the rotation period of the generator.

5. An electronic unit according to Claim 1, wherein a period at which the generator is stopped, unless the amount of brake applied to the generator is switched to the first brake setting value, is selected as an upper limit, and a period
25 at which the generator vibrates when the amount of brake applied to the generator is switched to the first brake setting value is selected as a lower limit, and the first setting period is set to a period between the upper limit and the lower limit.

6. An electronically controlled mechanical timepiece comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, a rotation control unit driven by the electrical energy to control the rotation period of the generator, and a time indication unit operated with the rotation of the generator, the rotation control unit comprising:

a brake control unit that compares a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

a generator-stop preventing unit that sets the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

7. A control program for an electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit driven by the electrical energy to control the rotation period of the generator, the control program for the electronic unit controlling the rotation control unit to:

compare a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

set the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

8. A recording medium recording a control program for an electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a

rotation control unit driven by the electrical energy to control the rotation period of the generator, the recorded control program for the electronic unit controlling the rotation control unit to:

compare a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

set the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

9. A control method for an electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit driven by the electrical energy to control the rotation period of the generator, the control method comprising:

comparing a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

setting the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

10. A method for manufacturing an electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit driven by the electrical energy to control the rotation period of the generator, the method comprising:

selecting as an upper limit a period at which the generator is stopped unless the amount of brake applied to the generator is switched to a first brake setting value,

selecting as a lower limit a period at which the generator vibrates when the amount of brake applied to the generator is switched to the first brake setting value,

and setting a first setting period to a period between the upper limit and the lower limit, such that the electronic unit operates to:

compare a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

set the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.

11. An electronic unit comprising a mechanical energy source, a generator driven by the mechanical energy source to generate induction electric power to supply electrical energy, and a rotation control unit driven by the electrical energy to control the rotation period of the generator, the rotation control unit comprising:

brake control means for comparing a reference signal, generated according to a signal sent from a time reference source, with a rotation detection signal corresponding to the rotation period of the generator to apply brake control to the generator; and

generator-stop preventing means for setting the amount of brake applied to the generator to a first brake setting value when a measured rotation period of the generator is equal to or longer than a first setting period, which is longer than a reference period, to prevent the generator from stopping.